

CLAIMS

1. Adjuvant product intended to improve the activity of a molecule when administered to a host, characterized in that it comprises at least one part of the P40 protein of *Klebsiella pneumoniae* or a protein having at least 80% homology with the P40 protein of *Klebsiella pneumoniae*.
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2. Adjuvant product according to Claim 1, characterized in that it comprises a protein having the sequence ID No. 2 or having at least 80% homology with this sequence.
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3. Adjuvant product according to one of Claims 1 or 2, characterized in that it consists in the sequence encompassed between amino acids 1 to 179 of the P40 protein of *K. pneumoniae*, or a sequence having at least 80% homology with the sequence encompassed between amino acids nos. 1 and 179 of the sequence of the P40 protein of *K. pneumoniae*.
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4. Adjuvant product according to one of Claims 1 or 2, characterized in that it consists of the sequence encompassed between amino acids 108 to 179 of the P40 protein of *K. pneumoniae* or a sequence having at least 80% homology with the sequence encompassed between amino acids nos. 108 and 179 of the P40 protein of *K. pneumoniae*.
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5. Adjuvant product according to one of Claims 1 or 2, characterized in that it consists of the sequence encompassed between amino acids nos. 127 to 179 of the P40 protein of *K. pneumoniae* or a sequence having at least 80% homology with the sequence encompassed between amino acids nos. 127 to 179 of the P40 protein of *K. pneumoniae*.
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6. Protein or peptide having one of the sequences ID No. 2, ID No. 4, ID No. 6 or ID No. 8.
7. DNA sequence encoding a product according to one of Claims 1 to 6.
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8. Immunogenic complex of the type which comprises an immunogenic element which is attached to an adjuvant which increases the strength of the immune response,

characterized in that the immunogenic element is an antigen or a hapten, and the adjuvant comprises a product according to one of Claims 1 to 6.

9. Immunogenic complex according to Claim 7, characterized in that the immunogenic element is attached to the adjuvant by a covalent bond.
10. Immunogenic complex according to one of Claims 8 or 9, characterized in that the immunogenic element consists of a fragment of the G protein of RSV.
11. Immunogenic complex according to one of Claims 8 to 10, characterized in that the immunogenic element, which is attached to the adjuvant, is fused to a protein which is a receptor for a serum protein, in particular human serum albumin.
12. Process for increasing the immunogenicity of an antigen or a hapten, characterized in that the said antigen or hapten is attached to an adjuvant according to one of Claims 1 to 6 in the form of a complex according to one of Claims 8 to 11.
13. Process according to Claim 12, characterized in that the antigen or hapten is attached to the adjuvant by chemical coupling.
14. Process according to one of Claims 12 or 13, characterized in that the antigen or hapten is fused to the adjuvant by genetic manipulation.
15. Vaccine, characterized in that it contains a complex according to one of Claims 8 to 11 and may be prepared by the process according to one of Claims 12 to 14.
16. DNA sequence according to Claim 7, as a medicament.
17. Use of a DNA sequence according to Claim 7 for preparing a vaccine to be used by the intramuscular or intradermal route.
18. Process for preparing an adjuvant product according to one of Claims 1 to 6 from membranes of bacteria of the species *Klebsiella pneumoniae*, characterized in that it comprises the steps of:
- a) precipitating the lipopolysaccharides by adding

- detergent and a salt of a divalent cation and recovering the supernatant,
- b) precipitating the proteins from the supernatant and resuspending the sediment,
 - 5 c) chromatographing the suspension on an anion exchanger and recovering the fractions which contain the adjuvant product,
 - d) chromatographing on a cation exchanger and recovering the fraction which contains the adjuvant product,
 - 10 e) concentrating the fraction obtained from step d) in order to recover an adjuvant product in the form of protein which is essentially free of liposaccharides.